### Georgia Violent Death Reproting System: An Overview

"You Matter" Workshop

Sponsored By: Georgia Department of Public Health

Rana Bayakly, MPH Chief Epidemiologist Chronic Disease, Health Behaviors and Injury Epidemiology Section June 13, 2019



### **OutLine**



Leading Causes of Death in Georgia-Making the PH Case



What is Georgia Violent Death Surveillance System



Homicide and Suicide-Georgia

### Top Five (5) Leading Causes of Death, Georgia 2013-2017

Rank	<1 YEAR	1-4 YEARS	5-9 YEARS	10-14 YEARS	15-19 YEARS	20-24 YEARS
1	Certain Conditions Originating in the Prenatal Period	Accidental Drowning and Submersion	Motor Vehicle Crashes	Motor Vehicle Crashes	Motor Vehicle Crashes	Motor Vehicle Crashes
	2,542	94	85	90	513	762
2	Congenital Malformation and chromosomal Abnormalities	Motor Vehicle Crashes	All Other Disease of the Nervous system	Intentional Self Harm (suicide)	Assault (Homicide)	Assault (Homicide)
	855	90	43	78	360	679
3	SIDS	Assault (Homicide)	Accidental Drowning and Submersion	All Other Disease of the Nervous system	Intentional Self Harm (suicide)	Intentional Self Harm (suicide)
	511	77	35	58	303	569
4	Suffocation 177	Congenital Malformation and chromosomal Abnormalities 74	Malignant Neoplasm of The Meninges, Brain and other CNS 34	Assault (Homicide) 33	Accidental Poisoning and Exposure to Noxious Substance 76	Accidental Poisoning and Exposure to Noxious Substance 423
	Assault (Homicide)	All Other Disease of the		Accidental	All Other Disease of the	All Other Disease of
5	Assault (Holliicide)	Nervous system	Congenital Malformation and chromosomal Abnormalities	Drowning and Submersion	Nervous system	the Nervous system
	57	34	34	31	66	91

### Top Five (5) Leading Causes of Death, Georgia 2013-2017

Rank	25-34 YEARS	35-44 YEARS	45-54 YEARS	55-64 YEARS	65-74 YESRS	75+ YEARS
1	Accidental Poisoning and Exposure to Noxious Substance 1,376	Accidental Poisoning and Exposure to Noxious Substance 1,346	Ischemic Heart and Vascular Disease 3,410	Ischemic Heart and Vascular Disease 7,124	Ischemic Heart and Vascular Disease 9,252	Ischemic Heart and Vascular Disease 20,306
2	Motor Vehicle Crashes 1,280	Intentional Self Harm (suicide)  1,044	Essential (primary) Hypertension & Hypertensive Renal & Heart Disease 1,581	Malignant Neoplasms of the Trachea, Bronchus & Lung 5,146	Malignant Neoplasms of the Trachea, Bronchus & Lung 7,730	Malignant Neoplasms of the Trachea, Bronchus & Lung 15,465
3	Intentional Self Harm (suicide)  1,085	Motor Vehicle Crashes 938	Malignant Neoplasms of the Trachea, Bronchus & Lung 1,531	Essential (primary) Hypertension & Hypertensive Renal & Heart Disease 3,038	ALL COPD Except Asthma 6,242	Alzheimer's Disease 15,227
4	Assault (Homicide) 975	Ischemic Heart and Vascular Disease 905	Accidental Poisoning and Exposure to Noxious Substance 1,437	ALL COPD Except Asthma 3,019	Cardiovascular Disease 3,765	Cardiovascular Disease 12,569
5	Human Immunodeficiency Virus (HIV) Disease	Assault (Homicide)	Intentional Self Harm (suicide)	Cardiovascular Disease	Essential (primary) Hypertension & Hypertensive Renal & Heart Disease	ALL COPD Except Asthma
	229	975	1,340	2,377	2,929	12,001

850 Georgians that were victims of homicide

1,540 Georgians died from Suicide

# 2 Georgians died of homicide

4 Georgians died of suicide

Each Day in 2018

# Georgia Violent Death Reporting System (GA-VDRS)

Collect the facts to find answers to prevent violent deaths in Georgia.

The only system that collect comprehensive information on violent deaths in Georgia.

#### GA-VDRS include data from:

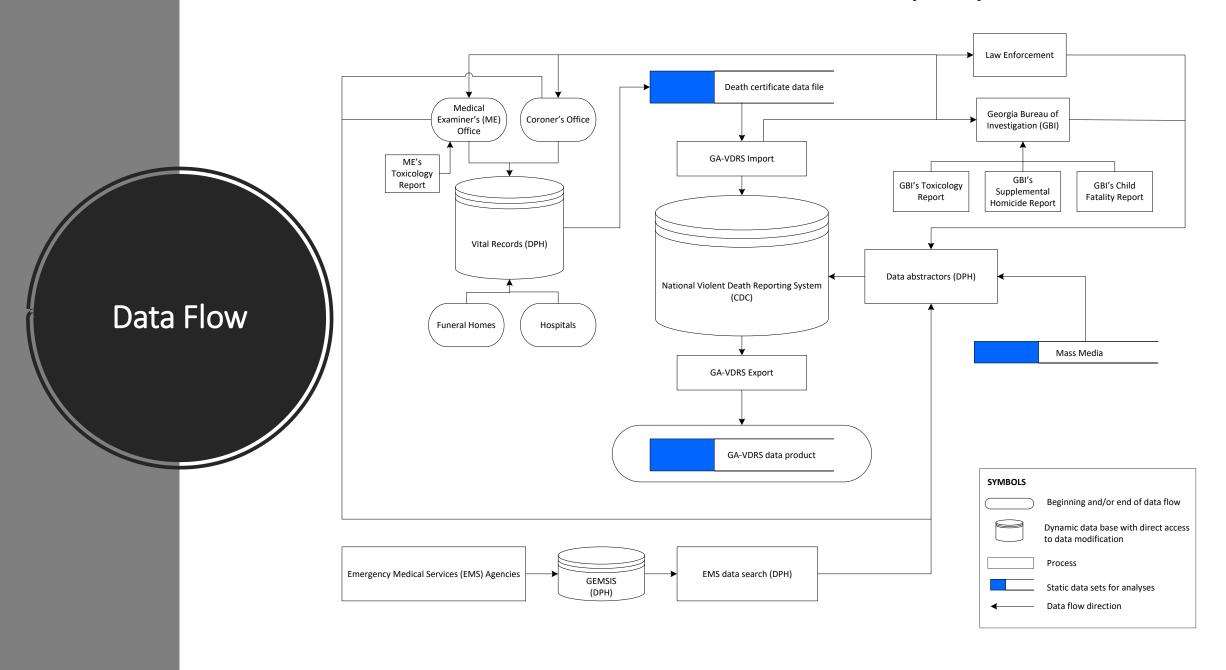
- Vital Records
- Coroner and Medical Examiner Reports
- Law Enforcement Reports
- Georgia Bureau of Investigation
- Child Fatality Review Data
- Supplemental Homicide Reports
- Emergency Medical Services (EMS) Data
- Toxicology Reports
- Media

# Georgia Violent Death Reporting System (GA-VDRS)

### GA-VDRS Continue to Investigate Other Data Sources:

- 911
- Medical Records
- Other PH Databases
  - ✓ Opioid Surveillance System
  - ✓ Trauma Registry
  - ✓ Hospital Based Syndromic Data

### **GEORGIA VIOLENT DEATH REPORTING SYSTEM (2018)**

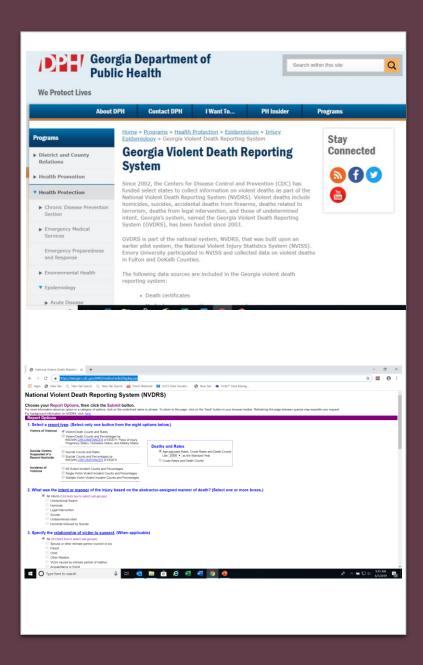


#### Background Information on **Life Stressors** Information on the Incident the Violent Incident such as: • Recent Job Lose Weapons Used • Financial Problems Location • Relationship Problems • Physical Health • Relationship Between Victim and • Mental Health Problems and Suspect Treatment Recent Family Lose Substance Abuse Problem

# GA-VDRS Include more than 600 Data Elements

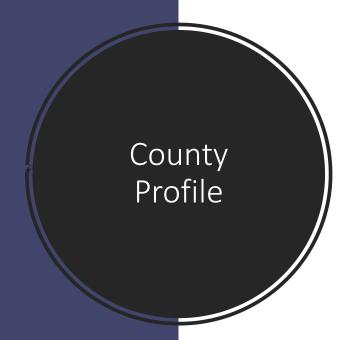
### Where Does It Go?

- Data are abstracted into CDC/NVDRS Online System. Data abstracted are de-identified.
- The NVDRS software and databases are maintained directly by CDC in Federal facilities. NVDRS is operated in compliance with National Institute of Standards Technology (NIST) Special Publication 800-53, "Security and Privacy Controls for Federal Information Systems and Organizations." The NVDRS System Security Plan is reviewed annually by CDC's Office of the Chief Information Security Officer (OCISO), which also conducts continuous monitoring of the NVDRS servers and databases.
- The NVDRS <u>database does not contain PII</u>, such as name, street address, date of birth, or Social Security Number. It identifies victims of violent death by means of an internally-generated case number that does not correspond to any external record number or identifier.
- System access is via the CDC SAMS platform, which requires identity verification for users and access control. NVDRS implements a role-based security system, with users in grantee states limited to accessing data from their state only. The system is not publicly accessible. Users are approved for access by the Principal Investigator in their state and the CDC Technical Steward, with identity verification provided by SAMS.



# What Have we Done with the Data so Far?

- Consolidated, edited and analyzed data are then made available through:
  - GA-VDRS Epidemiologist
    - ✓ Injury Prevention Program
    - ✓ Suicide Prevention Program
    - ✓ Researchers
    - ✓ Coroners/ME/Law Enforcement
    - ✓ Local Public Health Departments
    - ✓ Other State Agency such as Division of Aging
    - ✓ Georgia Coverdell Acute Stroke Registry/Coweta Cares
    - ✓ Most Recently –Hospital Assessment
  - GA-VDRS website <a href="https://dph.georgia.gov/GVDRS">https://dph.georgia.gov/GVDRS</a>
  - CDC/WISQARS https://wisqars.cdc.gov:8443/nvdrs/nvdrsDisplay.jsp



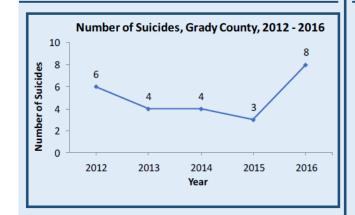
#### Suicide Fact Sheet: Grady County, 2012-2016

#### Suicide rates in Georgia, by County, 2012-2016

	Number of suicides by county	Suicide rate per 100,000 population	County Rank <sup>A</sup>
Grady	25	19.9	83
Decatur <sup>B</sup>	21	15.4	52
Thomas	25	11.1	14
State	6,257	12.4	

A Ranking is Lowest to Highest out of 88 counties that had 15 suicides or more.

<sup>&</sup>lt;sup>8</sup> These two counties are included to show rates of surrounding counties that had 15 suicide deaths or more





#### Georgia Violent Death Reporting System (GA-VDRS)

Percent of selected circumstances that contributed to suicides in Grady county, 2012-2016

Circumstance (6 Missing)	Percent (%)
Victim's physical health problems	26.3
Current mental health problem	26.3
Victim had a history of attempted suicides	10.5
Victim left a suicide note	5.3
Victim had a history of treatment for mental illness or substance abuse	5.3

#### Characteristics of suicides, Grady County, 2012-2016

Characte	Percent (%)	
Sex	Male	68.0
	Female	32.0
Race	White	84.0
T (11)	Black	16.0
Type of Weapo	72.0	
Hanging/S	Suffocation	28.0

<sup>&</sup>lt;sup>A</sup> Each victim could have used more than 1 weapon





A group of local partners committed to reinvesting existing resources in our community to better serve our citizens.





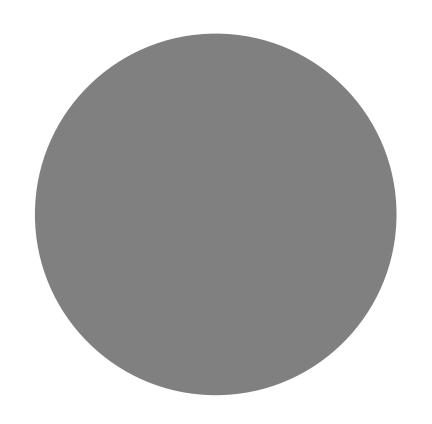




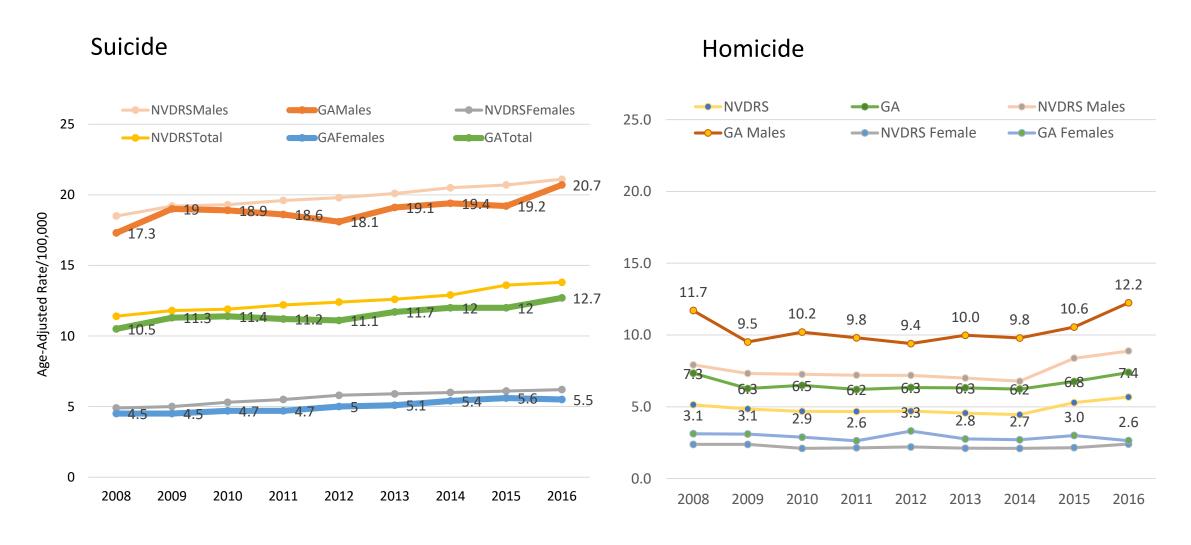


Who's involved in providing care?

# Homicide and Suicide Georgia Specific



### Age-Adjusted Rate by Year and Sex, Georgia, 2008 - 2016



# **Homicide Trend in Georgia**

- Overall Georgia Homicide Rate Increased by 8.2% from 2008 to 2016
  - From 2008 to 2012 Georgia homicide rate decreased by 19.6%
  - ➤ While from 2013 to 2016 Georgia homicide rate increased by 22%
- Males are 3-5 times more likely to become a victim of homicide than females

Year	Males	Females	RR
2016	12.2	2.6	4.7
2015	10.6	3.0	3.5
2014	9.8	2.7	3.6
2013	10	2.8	3.6
2012	9.4	3.3	2.8
2011	9.8	2.6	3.8
2010	10.2	2.9	3.5
2009	9.5	3.1	3.1
2008	11.7	3.1	3.8

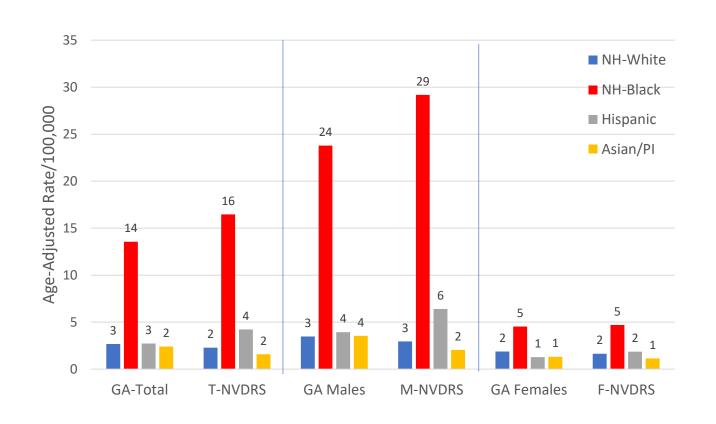
# Suicide Trend in Georgia

- Overall Georgia Suicide Rate Increased by 21% from 2008 to 2016
  - From 2008 to 2012 Georgia suicide rate increased by 5.7%
  - ➤ While from 2013 to 2016 Georgia suicide rate increased by 8.5%
- Males are 3-4 times more likely to die of suicide than females

Year	Males	Females	RR
2016	20.7	5.5	3.8
2015	19.2	5.6	3.43
2014	19.4	5.4	3.6
2013	19.1	5.1	3.7
2012	18.1	5.0	3.6
2011	18.6	4.7	4.0
2010	18.9	4.7	4.0
2009	19.0	4.5	4.2
2008	17.3	4.5	3.8

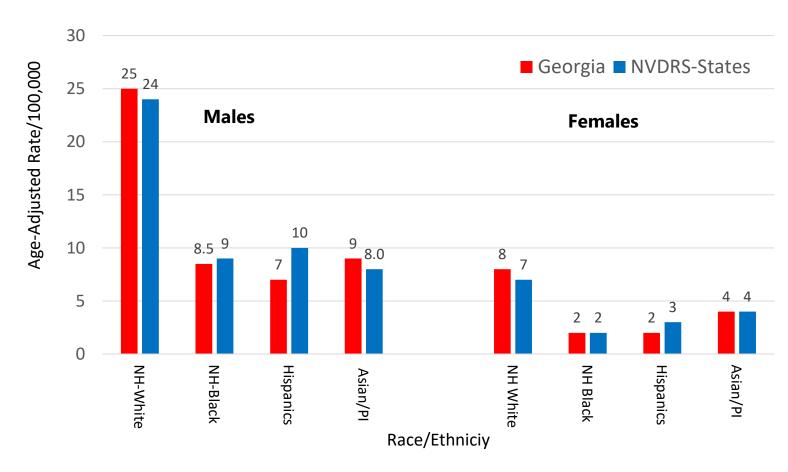
# Age-Adjusted Homicide Rate by Race/Ethnicity and Sex, Georgia, 2012-2016

- NH-Black males in Georgia had a lower homicide rate than NH-Black males in NVDRS-States.
  - 23.8/100,000 vs 29.2/100,000
- Hispanic males in Georgia had lower homicide rate than Hispanic males in NVDRS-States
  - 3.9/100,000 vs 6.4/100,000
- Georgia females had similar homicide rates when compared to NVDRS-States



# Age-Adjusted Suicide Rate by Sex, Race and Ethnicity, Georgia vs NVDRS, 2012-2016

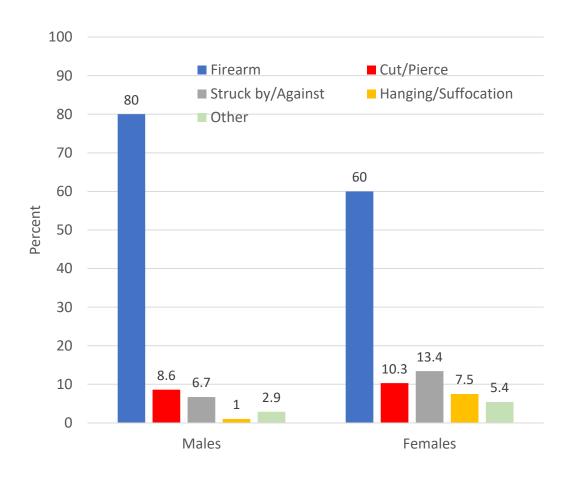
- NH-White males in Georgia had a higher suicide rate than NH-White males in NVDRS-States.
  - 25.4/100,000 vs 24.3/100,000
- Asian/Pacific Islanders male in Georgia had similar suicide rate than NVDRS-States
  - 8.6/100,000 vs 8.3/100,000
- NH-White females in Georgia had slightly higher suicide rate than NH-White females in NVDRS-States
  - 7.7/100,000 vs 7.1/100,000



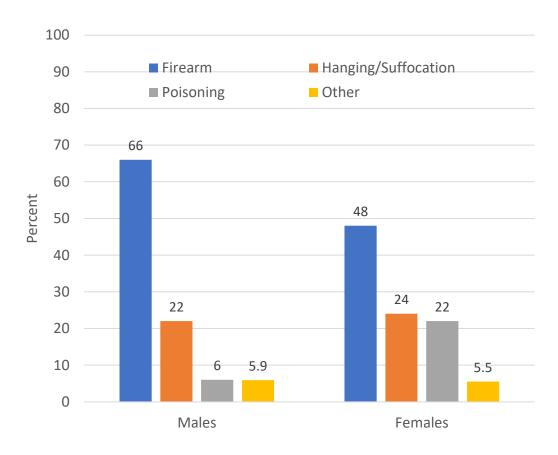
S NVDRS-States:AK,CO,GA,KY,MA,MD,NC,NJ,NM,OH,OK,OR,RI,SC,UT,VA,WI

### Percent by Type of Weapon Used

### Homicide



### Suicide



# Percent of Homicides by the Top 10 Known Circumstances

	Male		Female	
Circumstance Category	Number	Percent	Number	Percent
Altercation	797	44.6%	187	32.7%
Criminal involvement	661	37.0%	88	15.4%
Relationship problem	266	14.9%	329	57.5%
History of abuse	72	4.0%	58	10.1%
Substance abuse/alcohol problem	55	3.1%	21	3.7%
Mental health problem group	30	1.7%	13	2.3%

# Percent of Crimes that Preceded the Death by Sex, Georgia.

Crime that preceded the incident	Male	Female
Robbery / Burglary	55.2%	45.7%
Assault/Homicide	20.1%	12.9%
Other	14.0%	25.6%
Drug Trade	3.8%	0.0%
Motor vehicle theft	1.3%	1.4%
Arson	1.1%	1.4%
Rape/Sexual Assault	0.4%	10.0%
Gambling	0.2%	0.0%

Top Suicide Circumstances In Georgia

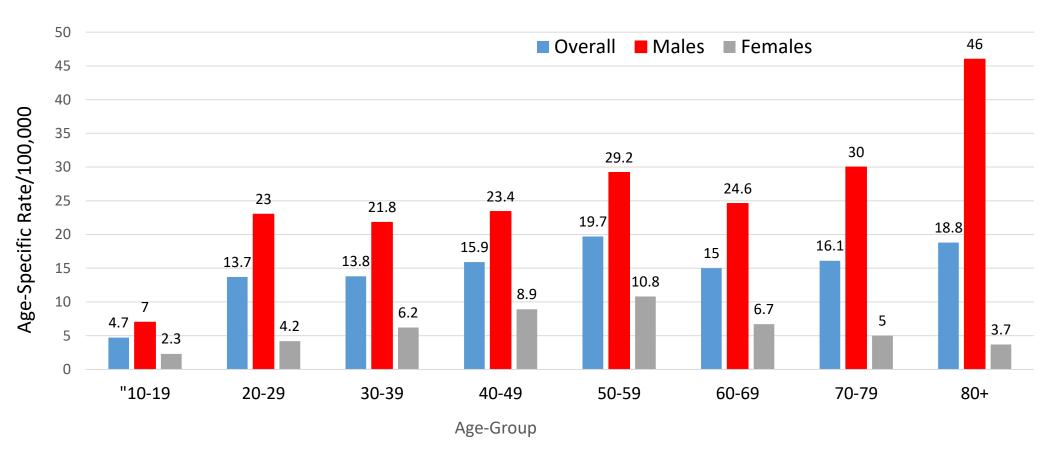
	Percent (%)
Current Mental Health Problem	37.8
Crisis in Preceding or Upcoming 2 weeks	27.5
Current Depressed Mood	25.7
Person left a Suicide Note	24.6
Disclosed Intent to Commit Suicide	22.3
Intimate Partner Problem	22.3
Ever Treated for Mental Health Problem	21.3
History of Suicidal Thoughts or Plans	20.4
Physical Health Problem	17.8
Argument or Conflict	15.7
Current Treatment for Mental Illness	14.3
Other Substance Abuse Problem	10.5
Other Suicide Circumstance	g

# Toxicology Results Among Suicides with Poison as Weapon, Georgia

Drug Type	Tested	Positive	Percent
Antidepressant	144	131	91%
Benzodiazepine	296	129	44%
Opiates	349	138	40%
Alcohol	183	62	34%
Amphetamine	105	32	31%
Barbiturates	285	17	6%
Cocaine	334	11	3%
Marijuana	285	4	1%

Note: Toxicology tests are not mutually exclusive, a single incident could have been positive for multiple substances

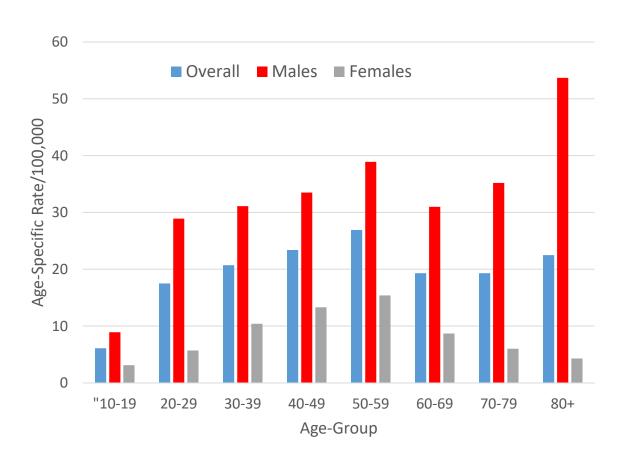
# Age-Specific Suicide Rate by Age-Group and Sex, Georgia, 2012-2016



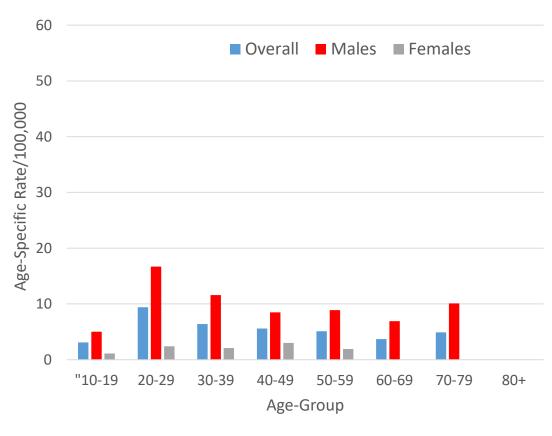
Source: GA-Violent Death Reporting System

# Age-Specific Suicide Rate by Sex and Age-Group; Georgians, 2012-2016

#### **Non-Hispanic White**



#### **Non-Hispanic Black**



Source: GA-Violent Death Reporting System

# Suicide: Homicides Followed by Suicides Georgia 2012-2016

- Overall there were 145 Suicide deaths after a recent homicide
- Of these 130 (89.7%) were males while 15 (10.3%) were females.
- 64 (43.8%) were NH-White; 52 (35.6%) were NH-Black;
- Firearm was used in 138 (94.5%) of all suicide deaths after a recent homicide

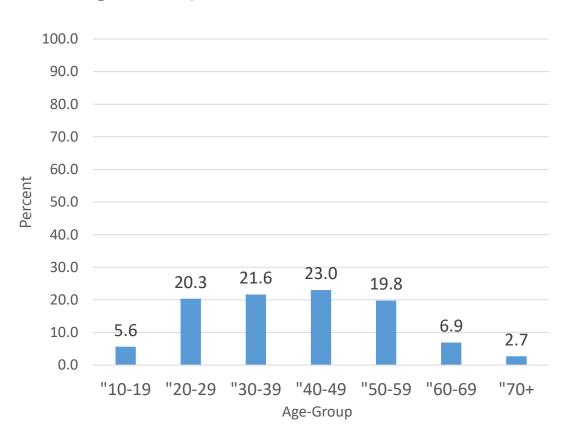


Circumstance	Percent (%)
Intimate partner problem	76.1
·	_
Crisis in preceding or upcoming 2 weeks	43.7
Argument or conflict	33.8
Recent criminal legal problem	14.1
Person left a Suicide Note	12.7
Family relationship problem	10.6
Other suicide circumstance	9.2
Physical health problem	7.8

Intimate partner is defined as a current or former girlfriend/boyfriend, dating partner, ongoing sexual partner, or spouse. There must be evidence of an intimate relationship.)

### Intimate Partner Problems

### **IPP Age-Group**



### **Age-Group 40-49 Leading Circumstance**

Circumstance	Percent
Intimate partner problem	30.7
Current mental health problem	41.5
Current depressed mood	32
Person left a suicide note	26.5
Ever treated for mental health problem	25.8
Disclosed intent to commit suicide	19
Crisis in past 2 weeks	18
Alcohol dependence	14
Physical health problem	12
Job problem	10

### Intimate Partner Problems

#### Weapon used

- Sixty-two percent (62%), 764 were by firearm
- Twenty-six percent (25.7%) 316 were by hanging/suffocation
- Six percent (5.6%), 8 were by poisoning



#### Relationship

Intimate partner is defined as a current or former girlfriend/boyfriend, dating partner, ongoing sexual partner, or spouse



# Current or Former Military Status

- In 2016, 232 or 17.3% of the suicide were among current or former military personal
  - 97% (N=226) of current or former military were males
  - 84% (N=190) of current or former military were NH-White males
  - 10% (N=24) of current or former military were NH-Black males
- Firearm was used in 76% (N=176) of the suicide
- 77.4% (N=147) of the NH-White males were due to Firearm

Current/Former Military	Percent (%)
Current Mental Health Problem	34.1
Physical Health Problem	31.1
Crisis in Preceding or Upcoming 2 weeks	27
Current Depressed Mood	26.4
Person left a Suicide Note	24
Disclosed Intent to Commit Suicide	25.8
History of Suicidal Thoughts or Plans	25.2
Intimate Partner Problem	24.6
Ever Treated for Mental Health Problem	16.2
Argument or Conflict	16.2
History of Suicide Attempts	10.2
Current Treatment for Mental Illness	9.6

# (g) Storrybledels